Managing Radioactive Waste

Los Alamos National Laboratory
Laboratory Implementation Requirement LIR 404-00-05.3
Issue Date: January 5, 1999 (Revised Date: September 13, 2004)
Mandatory Document

1.0 Introduction

Lessons Learned

NOTE: Click here for Lessons Learned *that may apply* to the requirements contained in this LIR.

1.1 Overview

Not a standalone document, this Laboratory Implementation Requirement (LIR) is part of a series of waste management documents. This document only contains requirements that are unique to radioactive waste. Radioactive waste is regulated under DOE Order 435.1, *Radioactive Waste Management*. The primary waste management document that contains the general non-waste-specific requirements that apply to all waste types is LIR 404-00-02, "General Waste Management Requirements."

This LIR states the implementation requirements that support LPR 404-00-00, "Environmental Protection."

This document supercedes the requirements contained in Notice 92.

1.2 In this Document

2.0 Purpose

This document specifies the requirements that shall be implemented for managing radioactive waste; that is, low-level waste (LLW), transuranic (TRU) waste, radioactive liquid waste (RLW), and the radioactive components of mixed waste.

3.0 Scope & Applicability

This document addresses the institutional requirements for managing radioactive waste. The requirements of this LIR shall apply to individual waste generators, their safety and environment responsible line management chain, and all organizations that handle, treat, store, dispose of, or transport radioactive waste.

Radioactive waste produced as the result of accelerator operations shall be managed as LLW.

4.0 Precautions & Limitations

GUIDANCE NOTE: See LIR 404-00-03, "Hazardous and Mixed Waste Requirements," for requirements related to the hazardous constituents of mixed waste.

Radioactive waste that contains hazardous waste is also regulated under the Resource Conservation and Recovery Act (RCRA) and by the New Mexico Hazardous Waste Act; therefore, adherence to these federal and state requirements shall be mandatory for waste operations at the Laboratory.

Radioactive waste that contains a substance regulated under the Toxic Substances Control Act (TSCA) shall also be managed in accordance with federal regulations governing the waste.

Waste leaving a radiological control area shall be characterized as radioactive or meet the release criteria of LIR 402-704-01, "Contamination Control."

GUIDANCE NOTE: This document does not contain requirements for managing high level waste as defined by the Department of Energy (DOE)

Consistent with the ISM Description Document (LAUR-98-2837) Section 5.3.2, this LIR includes those requirements in DOE Order 435.1, *Radioactive Waste Management*, that require a consistent implementation by all elements of the Laboratory to which those requirements apply.

GUIDANCE NOTE: The users of this LIR should be aware that DOE O 435.1 includes other requirements, such as design requirements for storage facilities for radioactive waste, in addition to those listed in this LIR.

5.0 Acronyms

CWDR	Chemical Waste Disposal Request
HLW	high-level waste
LLW	low-level waste
MLLW	mixed low-level waste
RCRA	Resource Conservation and Recovery Act
RLW	radioactive liquid waste
RLWTF	Radioactive Liquid Waste Treatment Facility
RWMB	radioactive waste management basis
TRAMPAC	TRUPACT-II Authorized Methods for Payload Control
TRU	transuranic
TSDF	treatment, storage, and disposal facility
TWID	TRU Waste Interface Document
TWSR	Transuranic Waste Storage Record
WAC	waste acceptance criteria
WIPP	Waste Isolation Pilot Plant
WPF	Waste Profile Form
WSS	Work Smart Standards

6.0 Definitions

High-level waste (HLW) – the highly radioactive waste material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations, and other highly radioactive material that is determined, consistent with existing law, to require permanent isolation {DOE O 435.1}.

Low-level waste (LLW) – radioactive waste that is not high-level waste, spent nuclear fuel, transuranic waste, byproduct material (as defined in Section 11e.(2) of the *Atomic Energy Act of 1954*, as amended), or naturally occurring radioactive material {DOE O 435.1}.

Mixed waste – Any waste containing hazardous waste and source, special nuclear, or by-product materials subject to the Atomic Energy Act of 1954. The use of the generic term "mixed waste" shall refer to both mixed LLW waste and mixed TRU waste.

Radioactive Waste Management Basis – Identifies physical and administrative controls for radioactive waste facilities, operations, and activities to ensure the protection of workers, the public, and the environment. The RWMB shall reference or define the conditions under which the facility may operate.

Staging – The accumulation of LLW to facilitate transportation, treatment, and/or disposal. Staging begins immediately after the waste has been determined to meet the requirements set forth in the LANL Waste Acceptance Criteria (WAC). Staging shall not exceed 90 days.

Storage – For the purpose of this document, the holding of radioactive waste for a temporary period, at the end of which the waste is treated, disposed of, or stored elsewhere {DOE O 435.1}. Storage shall not exceed one year.

Transuranic (TRU) waste – radioactive waste containing more than 100 nanocuries (3700 becquerels) of alpha-emitting transuranic isotopes per gram of waste, with half-lives greater than 20 years, except for: (1) high-level radioactive waste; (2) waste that the Secretary of Energy has determined, with the concurrence of the Administrator of the Environmental Protection Agency, does not need the degree of isolation required by the 40 CFR Part 191 disposal regulations; or (3) waste that the Nuclear Regulatory Commission has approved for disposal on a case-by-case basis in accordance with 10 CFR Part 61 {DOE O 435.1}.

7.0 Implementation Requirements

7.1 Division Leader, Program Director, Program Manager

The safety and environmentally responsible line management chain shall ensure the implementation of the responsibilities and requirements for managing radioactive waste in accordance with LIR 404-00-02, "General Waste Management Requirements.

7.2 Waste Generator

7.2.1 General Requirements

The waste generator's responsibilities and requirements for managing radioactive waste shall be implemented in accordance with the requirements contained in LIR 404-00-02, "General Waste Management Requirements."

7.2.2 Waste Generation Planning

- Prior to generating radioactive waste, planning shall be performed to address the entire life cycle of the waste stream. Guidance on life-cycle planning can be found in DOE G 435.1, Chapter 1.
- Waste without an identified disposal path shall meet the requirements of LIR 404-00-02, "General Waste Management Requirements," prior to generation.

7.2.3 Waste Minimization

Individual waste generators and waste-generating organizations shall minimize the volume of routine radioactive waste generated. At a minimum, the following methods shall be used to minimize waste:

- Controlling the movement of materials into and through radiological control areas.
- Reducing, reusing, or recycling radioactive and mixed waste at the source whenever technically and economically feasible.
- Decontaminating radioactive material, where appropriate.
- Segregating waste at the point of generation (for example, radioactive, non-radioactive and hazardous wastes shall not be commingled). The following segregation techniques should be considered as part of a waste minimization program
- Segregating LLW as either *compactible* or *noncompactible*.
- Segregating beryllium, polychlorinated biphenyls (PCBs), asbestos, and infectious materials from radioactive wastes.

7.2.4 Radioactive Waste Management Basis

Radioactive waste generators shall have a radioactive waste management basis (RWMB) that is consistent with Appendix A.

7.2.5 Marking and Labeling Radioactive Waste

Packages of radioactive waste shall be marked such that their contents can be identified.

Packages of radioactive waste in staging shall also be labeled and marked as "Radioactive" as required by the following documents:

- PLAN-WASTEMGMT-002, "LANL Waste Acceptance Criteria," Solid Waste Operations.
- LIR 402-700-01, "Occupational Radiation Protection Requirements," Los Alamos National Laboratory.

- LIR 404-00-03, "Hazardous and Mixed Waste Requirements for Generators," Los Alamos National Laboratory. (The requirements of this document shall be applicable if the waste contains hazardous constituents).

7.2.6 Characterization

In addition to the characterization requirements contained in LIR 404-00-02, "General Waste Management Requirements," radioactive waste generators shall provide the following characterization data to the receiving facility:

- Physical and chemical characteristics
- Volume, including the waste and any stabilization or absorbent material
- The identities, activities, and concentrations of radionuclides
- Weight of the container and contents
- Characterization date
- Generating source
- Packaging date
- Any additional data specified in the receiving facility's acceptance requirements

GUIDANCE NOTE: The Waste Profile Form (WPF) and Chemical Waste Disposal Request (CWDR) or Transuranic Waste Storage Record (TWSR) contain the characterization requirements listed above.

If not using acceptable knowledge, the data quality objectives process (EPA, 2000. Guidance for the Data Quality Objectives Process, EPA QA/G-4, EPA/600/R-96/055, U.S. Environmental Protection Agency, Washington, D.C., August 2000.), shall be used for identifying characterization parameters and acceptable uncertainty in characterization data.

Waste characterization data, container information, and generation, storage, and transportation information shall be transferred with or be traceable to the waste.

7.2.7 Packaging

Radioactive waste shall be packaged to ensure containment and protection for the duration of the anticipated staging/storage period and until disposal is achieved or until the waste is removed from the container.

Details on specific packaging requirements shall be provided in the receiving facility-specific waste acceptance requirements.

7.2.8 Transportation Requirements

Wastes shall be transported pursuant to the requirements contained in LIR 404-00-02, "General Waste Management Requirements."

The requirements contained in LIR 405-10-01, "Packaging and Transportation," shall be implemented for the specific packaging, labeling, shipping and transportation documentation requirements that are additional to those listed in the receiving facility's acceptance requirements.

Waste generators shall not cause radioactive waste to be transported to a receiving facility without prior approval from the receiving facility. Before transportation to a treatment, storage, and disposal facility (TSDF), shipments of radioactive waste shall have approved documentation as described in LIR 404-00-02, "General Waste Management Requirements."

Shipments of radioactive waste shall be scheduled in accordance with the receiving facility's waste acceptance criteria.

7.2.9 Specific Requirements for LLW and MLLW

7.2.9.1 Solid LLW

LLW generated at the Laboratory shall be disposed of at TA-54, Area G.

Organizations that wish to dispose of LLW at a facility other than TA-54, Area G shall follow the instruction in Section 7.2.9.4 of this LIR.

7.2.9.2 Documentation

A WPF (see LIG 404-00-03, "Instructions for Completing the Waste Profile Form") and a CWDR shall be completed for LLW and MLLW to be disposed of or stored at TA-54.

A WPF shall be completed for liquid waste destined for the Radioactive Liquid Waste Treatment Facility (RLWTF).

CWDRs are **not** required for liquid LLW transferred to the RLWTF through the radioactive liquid waste collection system.

A CWDR (in addition to the WPF) shall be completed for liquid LLW transported to the RLWTF by highway.

7.2.9.3 Staging and Storage at Generator Sites

The staging of LLW for the purpose of accumulating quantities of waste to facilitate transportation, treatment, and disposal shall not exceed 90 days.

If the LLW is not transferred to a treatment or disposal facility within 90 days, it shall be stored in accordance with the requirements of Section 7.3 of this document.

LLW that has an identified path to disposal shall not be stored longer than one year prior to disposal.

Radioactive waste being held prior to staging/storage must be labeled and managed in accordance with LIR 402-700-01, "Occupational Radiation Protection Requirements."

In addition to meeting the above requirements, MLLW must be stored in accordance with LIR 404-00-03, "Hazardous and Mixed Waste Requirements."

7.2.9.4 Requesting Off-site Disposal of LLW

Organizations that wish to dispose of LLW at a facility other than TA-54, Area G shall prepare a variance form (Form 1661a) in accordance with LIR 301-00-02, "Variances and Exceptions to Laboratory Operations Requirements." The variance request shall:

- Include the name of the facility to be used
- Document that this alternative is cost-effect and in the best interest of DOE.
- Consider of the life-cycle cost, the potential liability to DOE, and the protection of public health and the environment.

The requester shall also provide detailed characterization of the LLW for which the variance is requested.

The requester shall submit that request to the Group Leader of Facility & Waste Operations - Solid Waste Operations (FWO-SWO) at Mail Stop J595.

The FWO-SWO Group Leader shall:

- Evaluate the variance request for completeness and accuracy.
- Review the waste characterization data provided to ensure that the waste is characterized and certified to meet the identified facility's waste acceptance criteria.
- Forward the documentation provide by the requester, any supporting information developed as part of the review process, and the variance request, along with the FWO-SWO Group Leader's recommendation, to the FWO Division Leader for approval or disapproval.
- Submit a formal request to Los Alamos Site Office (LASO) of NNSA, as described in DOE M 435.1, to dispose of LLW at non-DOE disposal facilities, for variances approved by the FWO Division Leader.

The facility to be used shall be evaluated by the SWO Group Leader to determine that it has the required permit(s), license(s) and approvals for the specific LLW and that it complies with applicable Federal, state and local requirements. The acceptability of a

facility shall be determined based on an audit of the facility conducted within the last year by the DOE, UC, or other acceptable agency as determined by the FWO-SWO Group Leader. The Host State and State Compacts where non-DOE facilities are located shall be consulted by the FWO-SWO Group Leader.

GUIDANCE NOTE: Prior to approval LASO will notify DOE Headquarters and consult with the Office of the Assistant Secretary for Environmental, Safety and Health (EH-1). Requesters should factor in this approval when determining when the original variance request should be submitted to support the disposal schedule.

7.2.10 Specific Requirements for TRU and Mixed TRU Waste

7.2.10.1 General

Transuranic waste shall be identified as defense or non-defense waste based on funding source.

TRU waste generated at the Laboratory and destined for the Waste Isolation Pilot Plant (WIPP) shall be characterized by the Transuranic Waste Characterization (RRES-CH) and certified by the Transuranic Waste Certification (RRES-CE) group at the Laboratory.

GUIDANCE NOTE: RRES is responsible for characterizing and certifying TRU and mixed TRU waste in accordance with the WIPP WAC. See Appendix B for information on the WIPP TRU waste certification program.

A WPF and a TWSR (see LIG 404-00-01, "Waste Generator Instructions for Completing a Transuranic Waste Storage Record") shall be completed for TRU and mixed TRU waste to be stored at TA-54.

7.2.10.2 Storage

TRU waste shall be stored in accordance with the requirements of Section 7.3 of this document.

7.3 Waste Storage Area Operators

7.3.1 General

Waste Storage Area Operators shall:

- Develop a RWMB (See Appendix A).
- Submit the waste acceptance requirements to DOE for approval.
- Evaluate waste received for acceptance.
- Implement a process for inspecting and maintaining containers.
- Store waste in a manner and location that protects the integrity of the waste for the time of storage and minimizes worker exposure.
- Establish storage areas for radioactive waste in a weather-protected area.

- Ensure the waste storage area is posted with the appropriate warning signs in accordance with the requirements contained in LIR 402-700-01, "Occupational Radiation Protection Requirements."
- NOT store LLW that has an identified path to disposal for longer than one year prior to disposal.
- Store MLLW in accordance with the requirements contained in LIR 404-00-03, "Hazardous and Mixed Waste Requirements."
- Maintain pipelines and auxiliary facilities necessary for the transfer of RLW in an operational condition.

7.3.2 Storage to Facilitate Treatment

This section addresses specific Laboratory radioactive waste management requirements that are included within the DOE/UC contract. *WSS Controlled*

Radioactive waste that is capable of detonation, explosive decomposition, reaction at anticipated pressures and temperatures, explosive reaction with water, or is pyrophoric shall not be stored longer than 1 year.

- This storage shall be solely for the purpose of the accumulation of such quantities necessary to facilitate proper treatment. Each container shall be clearly marked to identify its contents and the date each period of accumulation begins.
- The details on how this waste is stored safely shall be addressed in the RWMB.
- If the waste is also hazardous, the storage must be at a RCRA storage area.
- Storage of such waste beyond 1 year shall require the approval of the Department of Energy.
- Additionally, if the waste is also hazardous and greater 1 year since the date of generation, the waste shall be added to the LANL Site Treatment Plan and approval shall be obtained from the New Mexico Environment Department.
- The storage facility shall bear the burden of proving that such storage is solely for the purpose of accumulation to facilitate treatment.

7.3.3 Contingency Storage for RLW

For off-normal or emergency situations involving RLW storage or treatment, spare capacity shall be maintained to receive the largest volume of liquid contained in any one storage tank or treatment facility.

7.4 Waste Treatment Operators

Waste Treatment Operators shall:

- Develop a RWMB (See Appendix 1).
- Submit the waste acceptance requirements to DOE for approval.
- Evaluate waste received for acceptance.
- Have contingency storage that meets the requirements of Section 7.3.3 of this document.
- Maintain pipelines and auxiliary facilities necessary for the transfer of RLW in an operational condition.

7.5 Solid Waste Operations Group (FWO-SWO)

FWO-SWO shall:

- Receive and store MLLW and TRU waste in TA-54's storage facilities.
- Receive and dispose of solid LLW at the TA-54 disposal facility.
- Coordinate and track off-site shipments of LLW and MLLW.
- Transport MLLW within LANL boundaries.

GUIDANCE NOTE: Other organizations are not precluded from transporting MLLW within LANL boundaries.

- Review and approve documentation for LLW, MLLW, and TRU waste before shipment.
- Approve and schedule LLW, MLLW, and TRU waste shipments to TA-54.
- Coordinate and track off-site TRU waste shipments, excluding shipments destined for WIPP.

7.6 Waste Management Coordinator

The Waste Management Coordinator's responsibilities for managing radioactive waste shall be implemented in accordance with the requirements contained in LIR 404-00-02, "General Waste Management Requirements."

7.7 Radioactive Liquid Waste Group (FWO-WFM)

FWO-WFM shall:

- Receive and process radioactive liquid waste.
- Maintain the pipelines used for transferring liquid waste to TA-50 as required by LIR 404-00-02, "General Waste Management Requirements."
- Transport radioactive liquid waste from the generators' sites to TA-50.

7.8 Transuranic Waste Certification (RRES-CE)

RRES-CE shall:

- Manage the WIPP waste certification program for the Laboratory.
- Certify TRU waste for shipment to WIPP.
- Review and approve certification documentation of TRU waste destined for WIPP.
- Process certification data before TRU waste shipments are released to WIPP.

7.9 Transuranic Waste Certification (RRES-CH)

RRES-CH shall:

- Characterize TRU waste for shipment to WIPP
- Review and approve Characterization documentation of TRU waste destined for WIPP.
- Process TRU waste characterization data before submitting to RRES-CE

7.10 Waste and Decon Services (RRES-WDS)

RRES-WDS shall:

- Support waste characterization activities of TRU waste for shipment to WIPP.
- Receive, process, and transport TRU waste for WIPP characterization.
- Load and ship TRU waste to WIPP.
- Coordinate and track off-site TRU waste shipments to WIPP.

8.0 Records

The requirements contained in LIR 404-00-02, "General Waste Management Requirements," shall be implemented for general waste record keeping and documentation requirements that apply to all waste types.

Original WPFs, CWDRs, and TWSRs shall be forwarded to FWO-SWO for approval.

Original WPFs, CWDRs, and TWSRs shall be maintained as permanent records by FWO.

9.0 References

9.1 Document Ownership

The Waste Management Policy and Procedure Council (WMPPC) shall be the Office of Institutional Control (OIC) for this document.

9.2 Referrals

Facility and Waste Operations - Radioactive Liquid Waste Treatment Facility (FWO-RLWTF), 7-4301

Facility and Waste Operations - Solid Waste Operations (FWO-SWO), 5-6158

WIPP Certification (RRES-CE), 7-8532

WIPP Characterization (RRES-CH), 5-0548

Waste Decon Services (RRES-WDS), 7-7800

Hazardous Materials Packaging and Transportation (SUP-5), 7-4127

Hazardous and Solid Waste (RRES-SWRC), 5-0677

9.3 References

"Acceptable Knowledge," LIG 404-00-02.

"Atomic Energy Act," Public Law 703 (1954).

"Contamination Control," LIR 402-704-01.

Department of Energy Order 460.1A, "Packaging and Transportation Safety."

Department of Energy Order 460.2, "Departmental Material Transportation and Packaging Management."

Department of Energy Order 435.1, "Radioactive Waste Management."

"General Waste Management Requirements," LIR 404-00-02.

"Hazardous and Mixed Waste Requirements," LIR 404-00-03.

"Instructions for Completing the TRU Waste Storage Record," LIG 404-00-01.

"Instructions for Completing the Waste Profile Form," LIG 404-00-03.

"LANL Waste Acceptance Criteria," PLAN-WASTEMGMT-002.

"Occupational Radiation Protection Requirements," LIR 402-700-01

"Packaging and Transportation," LIR 405-10-01.

Title 40, Code of Federal Regulations Part 264, *Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities.*

Title 40, Code of Federal Regulations Part 270, *Administered Permit Programs: The Hazardous Waste Permit Program.*

"Transuranic Waste Certification Plan," TWCP-PLAN-0.2.4-001.

10. Appendices

Appendix A. Radioactive Waste Management Basis

Appendix B. Los Alamos WIPP-Waste Certification Plan

Appendix A

Radioactive Waste Management Basis

General
Radioactive waste facilities, operations, and activities shall have an RWMB consisting of physical and administrative controls to ensure the protection of workers, the public, and the environment. The RWMB shall reference or define the conditions under which the facility may operate. The following specific controls shall be part of the RWMB:

- Generators. The waste certification program
- Treatment Facilities. The waste acceptance requirement and the waste certification program
- Storage Facilities. The waste acceptance requirement and the waste certification program

The RWMB shall be submitted to and approved by DOE before a new operation begins.

Operations shall be curtailed or facilities shut down for failure to establish, maintain, or operate consistently with an approved RWMB.

Waste Certification Program
A waste certification program shall be developed, documented, and implemented to ensure that the waste acceptance requirements of facilities receiving radioactive waste are met. The certification program shall:

- Designate the officials who have authority to certify and release waste for shipment;
- Specify what documentation is required for waste generation, characterization, shipment, and certification
- Provide requirements for auditability, retrievability, and storage of required documentation and specify the records retention time

Radioactive waste shall be certified as meeting the waste acceptance requirements before it is transferred to the receiving facility.

Radioactive waste that has been certified shall be managed to ensure that it maintains its certification status.

Waste Acceptance Requirements

The waste acceptance requirements shall establish the facility's requirements for the receipt, evaluation, and acceptance of waste.

Waste acceptance requirements for radioactive waste storage areas and treatment facilities shall specify the following:

- Allowable activities and/or concentrations of radionuclides
- Acceptable waste form and/or container requirements to ensure the chemical and physical stability of the waste under conditions that might be encountered during transportation, storage, treatment, or disposal
- Restrictions or prohibitions on waste, materials, or containers that may adversely affect waste handlers or compromise facility or waste container performance

The basis, procedures, and levels of authority required for granting exceptions to the waste acceptance requirements shall be contained in the waste acceptance requirements.

Monitoring Program

Facilities that generate, treat, or store radioactive waste shall establish and maintain a monitoring program as part of the RWMB. In developing the monitoring program, facilities shall consider the need for monitoring of the following parameters:

- Temperature
- Pressure for closed systems
- Radioactivity in ventilation exhaust
- Radioactivity in liquid effluent stream
- Flammable and explosive mixtures of gases

If a facility stores RLW, the need for monitoring the following additional parameters shall be considered:

- Liquid level
- Waste volume
- Waste chemistry

Facility monitoring programs shall include verification that passive and active control systems have not failed.

Appendix B

Los Alamos WIPP-Waste Certification Plan

The Los Alamos National Laboratory (LANL) Transuranic-Waste Certification Plan incorporates the certification and transportation requirements of the WIPP Waste Acceptance Criteria (WAC) for both newly generated and retrievably stored waste. The transportation requirements are detailed in Section 4.0, "LANL Compliance for TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)," of the TRU-Waste Certification Plan. The TRU-Waste Certification Plan is currently applicable to waste certification activities for contact-handled (CH) TRU waste only. When the Carlsbad Field Office (CBFO) develops and publishes requirements for remote-handled (RH) TRU waste and RH-TRU-related TRAMPAC, the TRU-Waste Certification Plan will be revised to reflect the incorporation of these requirements.

The TRU-Waste Certification Plan establishes the programmatic framework and criteria within which waste generators must operate to ensure their wastes can be certified as meeting the requirements of the WIPP WAC. The Plan includes the following sections:

- Section 2.0 – Certification Program Organization
- Section 3.0 – LANL Compliance for WIPP WAC
- Section 4.0 – LANL Compliance for TRAMPAC
- Section 5.0 – Quality Assurance Program Plan
- Section 6.0 – Preparation of TRU-Waste Interface Documents

Section 6.0 is most important to TRU waste generators, as it describes the requirements for Laboratory waste-generator-specific plans and procedures to demonstrate compliance with the TRU-Waste Certification Plan. The generator is required to prepare TRU Waste Interface Documents (TWIDs). These TWIDs serve to document the process by which waste stream analytical data and other acceptable knowledge is evaluated to ensure each waste stream is characterized, packaged, and certified in compliance with the WIPP WAC. If the requirements for sampling, characterization, and packaging are met, the waste will ultimately be certified and transported to WIPP.

Once a TWID has been prepared, it is subject to a Laboratory assessment regarding other the document meets the requirements in the TRU-Waste Certification Plan. The assessment consists of a review by certification program personnel (in the form of an audit) of all facility-specific, certification-related documents referenced in the TWID.